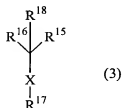


IN THE CLAIMS

Please amend the claims as follows:

Claims 1-34: (Canceled).

35. (New): A compound represented by the formula (3):



wherein

R<sup>15</sup> represents a substituted pyridyl group,

R<sup>16</sup> represents a C<sub>6-14</sub> aromatic hydrocarbon group which may have at least one substituent,

R<sup>17</sup> represents a C<sub>6-14</sub> aromatic hydrocarbon group which may have at least one substituent,

R<sup>18</sup> represents a hydrogen atom or a C<sub>1-6</sub> alkyl group, and

X represents -S-, -SO- or -SO<sub>2</sub>;

or an N-oxide or S-oxide of thereof; a salt thereof; or a solvate thereof.

36. (New): The compound of Claim 35, wherein R<sup>15</sup> represents a substituted pyridyl group; or an N-oxide or S-oxide of thereof; a salt thereof; or a solvate thereof.

37. (New): The compound of Claim 35, wherein

R<sup>16</sup> represents a phenyl group which may have at least one substituent, and

R<sup>17</sup> represents a C<sub>6-14</sub> aromatic hydrocarbon group which may have at least one substituent,

or an N-oxide or S-oxide of thereof; a salt thereof; or a solvate thereof.

38. (New): The compound of Claim 37, wherein R<sup>15</sup> represents a substituted pyridyl group; or an N-oxide or S-oxide of thereof; a salt thereof; or a solvate thereof.

39 (New): The compound of Claim 35, wherein X represents -SO<sub>2</sub>-; or an N-oxide or S-oxide of thereof; a salt thereof; or a solvate thereof.

40. (New): The compound of Claim 35, wherein the aromatic hydrocarbon group represented by R<sup>16</sup> or R<sup>17</sup> is monocyclic or polycyclic aromatic hydrocarbon group or an N-oxide or S-oxide of thereof; a salt thereof; or a solvate thereof.

41. (New): The compound of Claim 35, wherein the substituent for R<sup>15</sup>, R<sup>16</sup>, or R<sup>17</sup> is at least one group represented by the formula -Q<sup>201</sup>-Q<sup>202</sup>-Q<sup>203</sup>-Q<sup>204</sup>-Q<sup>205</sup>-Q<sup>206</sup>-Q<sup>207</sup>, wherein

Q<sup>201</sup> represents a single bond, an alkyl group having from 1 to 6 carbon atoms, an alkenyl group having from 2 to 6 carbon atoms or a heterocyclic group;

Q<sup>202</sup> represents a single bond, -O-, -NH-, -CH=N-, -C(alkyl)=N-, -N(alkyl)- or -S-;

Q<sup>203</sup> represents a single bond, -CO-, -CS-, -SO-, -SO<sub>2</sub>- or -CONH-;

Q<sup>204</sup> represents a single bond, an alkyl group from 1 to 6 carbon atoms, an alkenyl group having from 2 to 6 carbon atoms, a cycloalkyl group, a cycloalkenyl group, an aromatic hydrocarbon group or a heterocyclic group;

Q<sup>205</sup> represents a single bond, -NH- or -N(alkyl)-;

Q<sup>206</sup> represents a single bond, -O-, -CO-, -CS-, -SO<sub>2</sub>-, -SO- or -S-; and

Q<sup>207</sup> represents a hydrogen atom, a halogen atom, a hydroxy group, an oxo group, a C<sub>1-6</sub> alkyl group, a C<sub>2-6</sub> alkenyl group, a C<sub>3-8</sub> cycloalkyl group, a C<sub>1-6</sub> alkoxy group, a C<sub>2-6</sub> alkenyloxy group, an azide group, a cyano group, an amino group, a C<sub>1-6</sub> alkylamino group, a di(C<sub>1-6</sub> alkyl)amino group, a C<sub>2-6</sub> alkanoylamino group, a di(C<sub>2-6</sub> alkanoyl)amino group, a carboxyamino group, a C<sub>1-6</sub> alkoxycarbonylamino group, a di(C<sub>1-6</sub> alkoxy)carbonylamino group, a heterocyclic group, an aromatic hydrocarbon group, a cycloalkenyl group, a heterocyclic oxy group, or an aromatic hydrocarbon-oxy group (wherein, the alkyl group having from 1 to 6 carbon atoms, alkenyl group having from 2 to 6 carbon atoms, cycloalkyl group, cycloalkenyl group, heterocyclic group, heterocyclic-oxy group, aromatic hydrocarbon group or aromatic hydrocarbon-oxy group may be substituted with 1 to 3 substituents selected from halogen atoms, C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy groups, C<sub>2-6</sub> alkenyl groups, carboxyamino C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxycarbonylamino C<sub>1-6</sub> alkyl groups, formyl group, C<sub>2-6</sub> alkanoyl groups, oxo group, nitro group, cyano group, azide group, amidino group, C<sub>2-6</sub> alkenyloxy groups, hydroxy group, carboxyl group, C<sub>7-16</sub> aralkyl groups, thioxo group, C<sub>2-7</sub> alkanoyl groups, C<sub>2-7</sub> thioalkanoyl groups, thioformyl group, amino group, C<sub>1-6</sub> alkylamino groups, di(C<sub>1-6</sub> alkyl)amino groups, C<sub>1-6</sub> alkoxycarbonyl groups, carbamoyl group, C<sub>1-6</sub> alkylcarbamoyl groups, di(C<sub>1-6</sub> alkyl)carbamoyl groups, thiocarbamoyl group, C<sub>1-6</sub> alkylthiocarbamoyl groups, di(C<sub>1-6</sub> alkyl)thiocarbamoyl groups, C<sub>1-6</sub> alkoxycarbamoylamino groups, C<sub>1-6</sub> alkoxycarbamoyl(C<sub>1-6</sub> alkyl)amino groups, C<sub>2-7</sub> alkanoylamino groups, C<sub>2-7</sub> alkanoyl (C<sub>1-6</sub> alkyl)amino groups, thio C<sub>2-7</sub> alkanoylamino groups, thio C<sub>2-7</sub> alkanoyl (C<sub>1-6</sub> alkyl)amino groups, formylamino group, formyl(C<sub>1-6</sub> alkyl)amino groups, thioformylamino group, thioformyl(C<sub>1-6</sub> alkyl)amino groups, C<sub>2-7</sub> alkanoyloxy groups, formyloxy group, C<sub>1-6</sub> alkoxycarbonyloxy groups, carbamoyloxy group, C<sub>1-6</sub> alkylcarbamoyloxy groups, di(C<sub>1-6</sub> alkyl)carbamoyloxy groups, aminocarbonylamino group, (C<sub>1-6</sub> alkyl)aminocarbonylamino groups, di(C<sub>1-6</sub> alkyl)aminocarbonylamino groups, aminocarbonyl(C<sub>1-6</sub> alkyl)amino groups,

(C<sub>1-6</sub> alkyl)aminocarbonyl(C<sub>1-6</sub> alkyl)amino groups, di(C<sub>1-6</sub> alkyl)aminocarbonyl(C<sub>1-6</sub> alkyl)amino groups, mercapto group, C<sub>1-6</sub> alkylthio groups, C<sub>1-6</sub> alkylsulfinyl groups, C<sub>1-6</sub> alkylsulfonyl groups, aminosulfonyl group, C<sub>1-6</sub> alkylaminosulfonyl groups, di(C<sub>1-6</sub> alkyl)aminosulfonyl groups, C<sub>1-6</sub> alkylsulfonylamino groups, C<sub>1-6</sub> alkylsulfonyl(C<sub>1-6</sub> alkyl)amino groups, aminosulfonylamino group, C<sub>1-6</sub> alkylaminosulfonylamino groups, di(C<sub>1-6</sub> alkyl)aminosulfonylamino groups, aminosulfonyl(C<sub>1-6</sub> alkyl)amino groups, C<sub>1-6</sub> alkylaminosulfonyl(C<sub>1-6</sub> alkyl)amino groups, and di(C<sub>1-6</sub> alkyl)aminosulfonyl(C<sub>1-6</sub> alkyl)amino groups;

or an N-oxide or S-oxide of thereof; a salt thereof; or a solvate thereof.

42. (New): The compound of Claim 35, wherein R<sup>16</sup> and R<sup>17</sup> may have 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy groups, C<sub>2-6</sub> alkenyl groups, formyl group, C<sub>2-6</sub> alkanoyl groups, carboxyl group, carboxyamino C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxycarbonylamino C<sub>1-6</sub> alkyl groups, oxo group, nitro group, cyano group, amidino group, C<sub>2-7</sub> alkenyloxy groups, hydroxy group, thioxo group, amino group, C<sub>1-6</sub> alkylamino groups, di C<sub>1-6</sub> alkylamino groups, C<sub>1-6</sub> alkoxycarbonyl groups, carbamoyl group, C<sub>1-6</sub> alkylcarbamoyl groups, di C<sub>1-6</sub> alkylcarbamoyl groups, thiocarbamoyl group, C<sub>1-6</sub> alkylthiocarbamoyl groups, di C<sub>1-6</sub> alkylthiocarbamoyl groups, mercapto group, C<sub>1-6</sub> alkylthio groups, C<sub>1-6</sub> alkylsulfinyl groups and C<sub>1-6</sub> alkylsulfonyl groups); and

R<sup>15</sup> is substituted with a halogen atom, C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkoxy group, C<sub>2-6</sub> alkenyl group, C<sub>2-6</sub> alkenyloxy group, hydroxy group, carboxyl group, carboxy C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkoxycarbonyl C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkoxycarbonyl-C<sub>2-6</sub> alkenyl group, hydroxyl C<sub>1-6</sub> alkyl group, C<sub>6-14</sub> aromatic hydrocarbon-sulfonyl C<sub>1-6</sub> alkyl group, heterocyclic-C<sub>1-6</sub> alkylamino group, heterocyclic group, heterocyclic-C<sub>1-6</sub> alkyl group, C<sub>6-14</sub>

aromatic hydrocarbon group, C<sub>6-14</sub> aromatic hydrocarbon C<sub>1-6</sub> alkyl group, C<sub>6-14</sub> aromatic hydrocarbon thio C<sub>1-6</sub> alkyl group, azido-(C<sub>1-6</sub> alkyl) group, amino C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkylamino C<sub>1-6</sub> alkyl group, di C<sub>1-6</sub> alkylamino C<sub>1-6</sub> alkyl group, hydroxyl C<sub>1-6</sub> alkylamino C<sub>1-8</sub> alkyl group, C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkylamino C<sub>1-6</sub> alkyl group, (hydroxy C<sub>1-6</sub> alkyl)(C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkyl group, C<sub>2-6</sub> alkanoylamino C<sub>1-6</sub> alkyl group, C<sub>6-14</sub> aromatic hydrocarbon sulfonylamino C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkoxycarbonylamino C<sub>1-6</sub> alkyl group, carbamoylamino C<sub>1-6</sub> alkyl group, N-alkylcarbamoylamino C<sub>1-6</sub> alkyl group, N,N-dialkylcarbamoylamino C<sub>1-6</sub> alkyl group, aminosulfonylamino C<sub>1-6</sub> alkyl group, N-alkylsulfonylamino C<sub>1-6</sub> alkyl group, N,N-dialkylsulfonylamino C<sub>1-6</sub> alkyl group, C<sub>6-14</sub> aromatic hydrocarbon C<sub>1-6</sub> alkylamino group, heterocyclic C<sub>1-6</sub> alkylamino group, carbamoyloxy C<sub>1-6</sub> alkyl group, N-alkylcarbamoyloxy C<sub>1-6</sub> alkyl group, N,N-dialkylcarbamoyloxy C<sub>1-6</sub> alkyl group, C<sub>6-14</sub> aromatic hydrocarbon-C<sub>1-6</sub> alkylcarbamoyloxy C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkoxycarbonyloxy-C<sub>1-6</sub> alkyl group, C<sub>6-14</sub> aromatic hydrocarbonoxycarbonyloxy C<sub>1-6</sub> alkyl group, C<sub>6-14</sub> aromatic hydrocarbonsulfonylamino-C<sub>1-6</sub> alkanoylamino C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkoxycarbonylamino C<sub>1-6</sub> alkylamino group, amino C<sub>1-6</sub> alkylamino group, C<sub>1-6</sub> alkylamino C<sub>1-6</sub> alkylamino group, di(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkylamino group, carboxyamino C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkoxycarbonylamino C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkylsulfonylamino C<sub>1-6</sub> alkyl group, amino C<sub>1-6</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl group, N-C<sub>1-6</sub> alkylamino C<sub>1-6</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl group, N,N-di C<sub>1-6</sub> alkylamino C<sub>1-6</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl group, heterocyclic carbonyl group, heterocyclic carbonylamino group, C<sub>6-14</sub> aromatic hydrocarboncarbonyl group, C<sub>6-14</sub> aromatic carbonylamino group, heterocyclic C<sub>1-6</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl group, heterocyclic C<sub>2-6</sub> alkenylcarbonylamino C<sub>1-6</sub> alkyl group, C<sub>6-14</sub> aromatic hydrocarbonalkenylcarbonylamino C<sub>1-6</sub> alkyl group, C<sub>6-14</sub> aromatic hydrocarboncarbonylamino C<sub>1-6</sub> alkyl group, heterocyclic carbonylamino C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkoxyoxalylamino C<sub>1-6</sub> alkyl group, carbamoyl group,

N-C<sub>1-6</sub> alkylcarbamoyl group, N,N-di C<sub>1-6</sub> alkylcarbamoyl group, C<sub>1-6</sub> alkyl-C<sub>3-8</sub> cycloalkylcarbamoyl group, C<sub>3-8</sub> cycloalkyl-C<sub>1-6</sub> alkylcarbamoyl group, heterocyclic carbamoyl group, C<sub>1-6</sub> aromatic carbamoyl group, heterocyclic carbonylhydrazonomethyl group, C<sub>6-14</sub> aromatic hydrocarboncarbonylhydrazonomethyl group, C<sub>1-6</sub> alkylthio C<sub>1-6</sub> alkylcarbamoyl group, C<sub>1-6</sub> alkylsulfinyl C<sub>1-6</sub> alkylcarbamoyl group, C<sub>1-6</sub> alkylsulfonyl C<sub>1-6</sub> alkylcarbamoyl group, hydroxyaminocarbonyl group, hydrazinocarbonyl group or N-C<sub>1-6</sub> alkylhydrazinocarbonyl group, thioformylamino-C<sub>6-14</sub> aromatic hydrocarbon-thiocarbonylamino C<sub>1-6</sub> alkyl group, thioformyl-(C<sub>1-6</sub> alkylamino-C<sub>6-14</sub> aromatic hydrocarbon-thiocarbonylamino C<sub>1-6</sub> alkyl group, formylamino-C<sub>6-14</sub> aromatic hydrocarbon-carbonylamino C<sub>1-6</sub> alkyl group, formyl-C<sub>1-6</sub> alkylamino-C<sub>6-14</sub> aromatic hydrocarbon-carbonylamino C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkanoyl-heterocycle-carbonylamino C<sub>1-6</sub> alkyl group, di(C<sub>2-6</sub> alkanoyl)amino(C<sub>1-6</sub> alkyl) group, di(C<sub>1-6</sub> alkoxycarbonyl)amino C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkyl-heterocycle-carbonyl group, C<sub>3-7</sub> cycloalkyl C<sub>1-6</sub> alkylaminocarbonyl group, C<sub>1-6</sub> alkoxyaminocarbonyl group, (hydroxy)(C<sub>1-6</sub> alkyl)aminocarbonyl group, (C<sub>1-6</sub> alkoxy)(C<sub>1-6</sub> alkyl)aminocarbonyl group, N'-C<sub>1-6</sub> alkylhydrazinocarbonyl group, N',N'-di C<sub>1-6</sub> alkylhydrazinocarbonyl group, N,N',N'-tri C<sub>1-6</sub> alkylhydrazinocarbonyl group, N'-(heterocycle-carbonyl)-hydrazinocarbonyl group, formyl group, hydroxyimino group, C<sub>1-6</sub> alkoxyimino group, bis(C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alky)amino C<sub>1-6</sub> alkyl group, hydroxy-C<sub>1-6</sub> alkyl-heterocyclic group, C<sub>1-6</sub> alkoxy-C<sub>1-6</sub> alkyl-heterocyclic group, C<sub>1-6</sub> alkoxycarbonylamino C<sub>1-6</sub> alkyl-heterocyclic group, amino C<sub>1-6</sub> alkyl-heterocyclic group, N-C<sub>1-6</sub> alkylamino C<sub>1-6</sub> alkyl-heterocyclic group, N,N-di C<sub>1-6</sub> alkylamino C<sub>1-6</sub> alkyl-heterocyclic group, hydroxy-heterocyclic group, C<sub>1-6</sub> alkoxy-heterocyclic group, carboxy-C<sub>2-5</sub> alkenyl group, or oxo group (wherein, the above-described C<sub>6-14</sub> aromatic hydrocarbon group or heterocyclic group may be substituted with a halogen atom, C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkoxy group, C<sub>2-6</sub> alkenyl group, formyl group, C<sub>2-6</sub> alkanoyl group, carboxyl group, carboxyamino

C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkoxy-carbonylamino C<sub>1-6</sub> alkyl group, oxo group, nitro group, cyano group, amidino group, C<sub>2-6</sub> alkenyloxy group, hydroxy group, thioxo group, amino group, C<sub>1-6</sub> alkylamino group, di C<sub>1-6</sub> alkylamino group, amino C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkoxy-carbonyl group, carbamoyl group, C<sub>1-6</sub> alkylcarbamoyl group, di C<sub>1-6</sub> alkylcarbamoyl group, thiocarbamoyl group, C<sub>1-6</sub> alkylthiocarbamoyl group, di(C<sub>1-6</sub> alkyl)thiocarbamoyl group, C<sub>2-7</sub> alkanoylamino group, C<sub>2-7</sub> alkanoyl(C<sub>1-6</sub> alkyl)amino group, thio(C<sub>2-7</sub> alkanoyl)amino group, thio(C<sub>2-7</sub> alkanoyl)(C<sub>1-6</sub> alkyl)amino group, formylamino group, formyl(C<sub>1-6</sub> alkyl)amino group, thioformylamino group, thioformyl(C<sub>1-6</sub> alkyl)amino group, C<sub>2-7</sub> alkanoyloxy group, formyloxy group, mercapto group, C<sub>1-6</sub> alkylthio group, C<sub>1-6</sub> alkylsulfinyl group, C<sub>1-6</sub> alkylsulfonyl group, aminosulfonyl group, C<sub>1-6</sub> alkylaminosulfonyl group, di(C<sub>1-6</sub> alkyl)aminosulfonyl group, C<sub>1-6</sub> alkylsulfonylamino group or C<sub>1-6</sub> alkylsulfonyl(C<sub>1-6</sub> alkyl)amino group);

or an N-oxide or S-oxide of thereof; a salt thereof; or a solvate thereof.

43. (New): The compound of Claim 35, wherein R<sup>17</sup> represents a phenyl group which may have at least one substituent, or an N-oxide or S-oxide of thereof; a salt thereof; or a solvate thereof.

44. (New): The compound of Claim 35, wherein R<sup>18</sup> represents a hydrogen atom, or an N-oxide or S-oxide of thereof; a salt thereof; or a solvate thereof.

45. (New): The compound of Claim 35, wherein

R<sup>17</sup> represents a phenyl group which may have at least one substituent, and

R<sup>18</sup> represents a hydrogen atom, or an N-oxide or S-oxide of thereof; a salt thereof; or a solvate thereof.

46. (New): The compound of Claim 35, wherein  $R^{15}$  represents an substituted pyridyl group, or an N-oxide or S-oxide of thereof, a salt thereof, or a solvate thereof.

47. (New): A method for treating a disease resulting from abnormal production or secretion of  $\beta$ -amyloid protein, comprising administering an effective amount of the compound of Claim 35 to a subject in need thereof.

48. (New): A method for inhibiting the production or secretion of  $\beta$ -amyloid protein, comprising administering an effective amount of the compound of Claim 35 to a subject in need thereof.

49. (New): A method for treating Alzheimer's disease, comprising administering an effective amount of the compound of Claim 35.

50. (New): A method for treating Down syndrome, comprising administering an effective amount of the composition of Claim 35.

51. (New): A pharmaceutical composition, comprising the compound of Claim 35, or N-oxide or S-oxide of the compound, salt thereof, or solvate thereof and a pharmaceutically acceptable carrier.

52. (New): A method of preparing a medicament, comprising adding the compound of Claim 35, or an N-oxide or S-oxide of thereof, a salt thereof, or a solvate thereof, to a pharmaceutically acceptable carrier.